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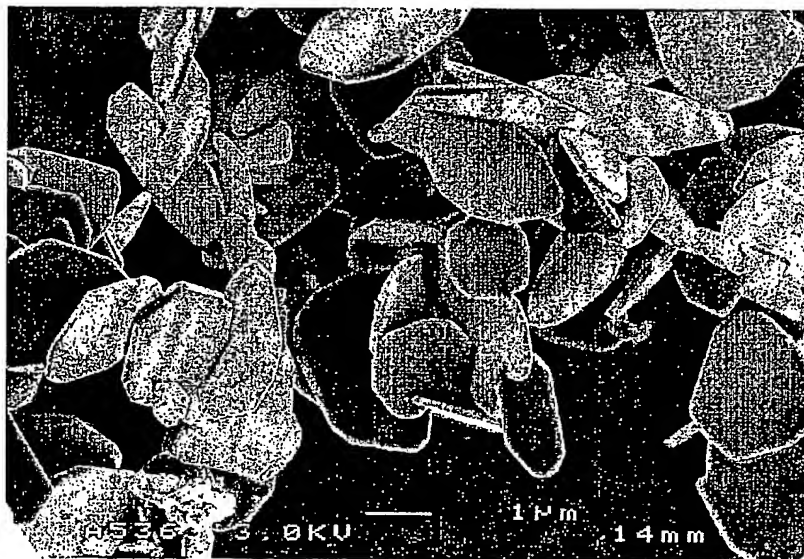
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(54) Title: PROCESS FOR THE PRODUCTION OF ULTRAFINE PLATE-LIKE ALUMINA PARTICLES



(57) Abstract: A process for producing plate-like alumina particles with a high aspect ratio is described. Nano-sized particles of an aluminium precursor compound, optionally formed by milling, are mixed with a sufficient volume fraction of a diluent and heat treated to form substantially discrete plate-like alpha alumina particles dispersed in the diluent. A mineraliser may be added to lower the effective melting point of the system. Substantially discrete plate-like particles may be formed without agitation when the heat treatment is conducted below the melting point of the diluent.

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A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. 7: C01F 7/02; C09C 1/40, 1/68, 3/00, 3/04		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT:IPC C01F 7/-, C09C 1/-, 3/-; Keywords ALUMINA, PLATE, HEAT, HEXAGONAL and similar words		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6015456A (Fukuda et al) 18 January 2000 See Examples 1-4	1-5,8,13,14, 16-25
X	Patent Abstracts of Japan, JP 2001-058818 (OTSUKA CHEM CO LTD) 6 March 2001 Abstract and Figure 1	1-7,13,16-23
X	US 5296085A (Faure et al) 22 March 1994 See Table 1 Example 1 and Column 2 lines 3-15	1-3,6,8-10, 13-14,17-25
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Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer GAYE HOROBIN Telephone No : (02) 6283 2069

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages.	Relevant to claim No.
X	US 5702519A (Nitta et al) 30 December 1997 See Examples and Comparative Examples	1-8,13-14, 16-20,22-25
X	US 5587010A (Shibasaki et al) 24 December 1996 See Examples 1-4	1-4,8,13,14, 16-23,25
X	US 5759213A (Adair et al) 2 June 1998 See Column 3 line 42 to Column 4 line 60, Figures 3, 11, 12	1-5,13,15-25
X	EP 0679611 B1 (SUMITOMO CHEMICAL COMPANY LIMITED) 28 July 1999 See Examples and Figures 1-3	23-25
X	US 5277702A (Thibault et al) 11 January 1994 See Figures 2-4 and column 1 lines 30-35; Column 2 lines 57-61	23-25
X	WO 1990/015777 A1 (ALUMINUM COMPANY OF AMERICA) 27 December 1990 See Examples 7-8 and Figure 7	1,8-10,13-14, 16-18,21,22, 25

INTERNATIONAL SEARCH REPORT

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
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		US	6197277	JP	9142836
JP	2001058818				
US	5296085	AU	62697/90	CA	2025037
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				US	4847064
				WO	9000523
END OF ANNEX					